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ABSTRACT

The National Council for Skill Development and Training and the Bangladesh Technical Education Board (BTEB) determine the technical vocational education and training (TVET) policy guidelines and implementation strategies. The TVET programs run by the government agencies, nongovernmental agencies, and private institutions are nonstandard and nonformal except for the vocational training institutes and technical training centers. The TVET system is quite inadequate to meet the internal job market and overseas employment demand for skilled workers. The National Skill Standard (NSS) classification is not in operation in the job market. The main thrust of TVET reform is the introduction of NSS both in the job market and in the training institutions. Significant issues that require attention are as follows: (1) a large-scale unmet demand for skilled labor in the internal job market and for overseas employment warrants strengthening of TVET facilities; (2) NSS classification should be established and put into operation in the internal job market and for overseas employment; and (3) the TVET system should be articulated with the general stream of education. (Appendixes include the NSS classification, and tables detailing gross domestic product and employment and demand for skilled workers. Contains 18 references.) (YLB)

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CASE STUDIES ON TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

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International Project on Technical and Vocational Education
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CASE STUDIES ON TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

The Development of Technical and Vocational Education in Bangladesh — A Case Study in Quality Improvement

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UNEVOC is the International Project on Technical and Vocational Education which was launched by UNESCO in August 1992. In the field of technical and vocational education, UNEVOC aims to foster the international exchange of ideas, experience and studies on policy issues; strengthen national research and development capabilities; facilitiate access to data bases and documentation; promote innovations in staff development; and support international cooperative actions.

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EXECUTIVE SUMMARY

The case study, like other research strategies, is a way of investigating an empirical topic by following a set of pre-specified procedures. The case study on the Bangladesh TVET system has been prepared following the guideline provided in the table of contents of the RMIT letter of intent for UNESCO UNEVOC case Studies Project. The preparation of the case study on the Bangladesh TVET system involves sequential steps covering the socio-economic background of the country, human resource development strategies, brief description of the TVET system, analysis of demand for and supply of skilled manpower and synthesis and interpretation of findings.

Bangladesh appeared on the world map as an independent sovereign state on December 16, 1971. The area of the country is 143,999 sq. km. Bangladesh lies in the north-eastern part of south Asia. Dhaka is the capital city of the country. The population is 110 million. Agriculture is the main occupation of the people. The other main economic activities include industries, communication, skilled manpower export, tourism, etc.

The constitution of Bangladesh obligates the Government to ensure free and compulsory education for all children. The constitution provides for the right to guaranteed employment at a reasonable wage. Education is considered as the key for human resource development. The structure of the formal education system mainly consists of primary, secondary, higher secondary and college/university education. The enrolment capacity in the primary schools is 13 million children and in the secondary schools, 3.66 millions. The primary enrolment ratio is 63 and that of secondary and tertiary are 17 and 4 respectively.

The technical vocational education and training (TVET) policy guidelines and implementation strategies are decided by the National Council for Skill Development and Training (NCSDT) and the Bangladesh Technical Education Board (BTEB). The TVET is provided at the secondary level. For the largest number of non-formal trade courses the TVET starts after eight years of schooling and for few selected trades, after secondary level. The TVET programmes run by the Government agencies, NGOs, and private institutions are non-standard and non-formal except the Vocational Training Institutes of the MOE and Technical Training Centres of the MOLM. There was no articulation of TVET with the secondary education up to 1993. From 1994 basic trade courses have been introduced as an optional subject for the students of secondary schools. A compulsory subject on agriculture has been introduced in the secondary schools from 1994.

The chapter covering demand for and supply of skilled manpower describes some of the indicators about the size and nature of the civilian labour force of the country both for the internal job market and for overseas employment. The TVET system is quite inadequate to meet both the internal job market and overseas employment demand for skilled manpower. There is no adequate data to prepare a consolidated demand of skilled manpower occupation wise. The NSS classification is not in operation in the job market. As per survey conducted by the BTEB both the employers and skilled workers are willing to accept the NSS classification in the job market. The VTI, TTC and UCEP training institutions are running non-formal NSS training programmes that are tested by the BTEB. A large number of Government, NGO and private training institutions are running non-formal and non standard training courses. The BTEB has taken up the official responsibility to prepare NSS out of the data generated through a number of job market studies. The MOE has initiated two programmes for the articulation of vocational education with the secondary general education system.

The main thrust the BTEB and NCSDT are jointly creating is the introduction of NSS both in the job market and in the training institutions. In this context the main issues raised and the recommendations that have been put forward for resolving these issues appear in Chapter 5 — Findings and Conclusions. The significant issues are:

- a large scale unmet demand of skilled manpower both for the internal job market and for the overseas employment warrants strengthening of TVET facilities.
- NSS classification should be established and put into operation both in the internal job market and for overseas employment. All the Government, NGO private and enterprise-based training programmes should be designed and implemented in line with the VTI and TTC NSS basic, III and II training programmes.
- articulation of TVET system with the general stream of education.

ABBREVIATIONS

ABBREVIATION	
APNTS	Association of Private Non-Profit Trade School
BRAC	Bangladesh Rural Advancement Committee
BTEB	Bangladesh Technical Education Board
BSCIC	Bangladesh Small and Cottage Industries Corporation
BMET	Bureau of manpower Employment and Training
BITAC	Bangladesh Industrial Technical Assistance Centre
DTE	Directorate of Technical Education
GDP	Gross Domestic Product
GNP	Gross National Product
GOB	Government of Bangladesh
GTZ	German Agency for Technical Cooperation
ILO	International Labour Organisation
LFS	Labour Force Survey
MAWTS	Mirpur Agricultural Workshop and Training School
MOLM	Ministry of Labour and Manpower
MOYS	Ministry of Youth and Sports
MOA	Ministry of Agriculture
MOE	Ministry of Education
NGO	Non-Government Organisation
NCSDT	National Council for Skill Development and Training
NSS	National Skill Standard
NSST	National Skill Standard Test
NCTB	National Curriculum and Textbook Board
ODA	Official Development Assistance
PDB	Power Development Board
RMIT	Royal Melbourne Institute of Technology
SSC	Secondary School Certificate
TVET	Technical Vocational Education and Training
TTC	Technical Training Centre
UCEP	Underprivileged Children Education Programme
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VTI	Vocational Training Institute
YMCA	Young Men's Christian Association

1. SHORT DESCRIPTION OF THE COUNTRY

The territory constituting Bangladesh was under the Muslim rule for over five and a half centuries from 1201 to 1751 A.D. The British ruled over the entire Indian sub-continent including this territory for nearly 190 years from 1757 to 1947. With the termination of the British rule in August, 1947 the sub-continent was partitioned into India and Pakistan. Bangladesh was then a part of Pakistan and was known as East Pakistan. Bangladesh appeared on the world map as an independent and sovereign state on December 16, 1971

Bangladesh lies in the north eastern part of South Asia between 20° 34' and 26° 38' north latitude and 88° 01' and 92° 41' east longitude. The country is bounded by India on the west, the north and the north-east and Burma on the south-east and the Bay of Bengal on the south. The area of the country is 143,999 sq. km.

Bangladesh enjoys generally a sub-tropical monsoon climate. While there are six seasons in a year, three namely, Winter, Summer and Monsoon are prominent. Winter which is quite pleasant begins in November and ends in February. Temperature ranges from minimum of 45° F - 55° F in the Winter to 75° F - 85° F in the summer with maximum up to 105° F.

1.1 THE CITIES AND THE PEOPLE

Dhaka is the capital and the largest metropolis (414 sq.km) of the country. Chittagong the port city, is the second largest metropolis. Metropolitan Dhaka has a population of about 6 million. The other metropolitan cities are Rajshani and Khulna.

The population of the country is 110 million. The percentage of urban population is 15.2 while that of rural 84.8.

The percentage of Muslim population is 86.6 while that of Hindu, Buddhist and Christian is 12.1, 0.6 and 0.3 respectively. There are 15.1 million households in the country distributed over 60,315 mouza (revenue villages). The official language is Bangla. English is widely spoken and understood.

1.2 ECONOMY

Agriculture is the main occupation of the people employing 65% of the labour force. This sector directly contributes around 37.6% to the gross domestic product.

Rice, wheat, jute, sugar cane, tobacco, oil seeds, pulses and potatoes are the principal crops. Various kind of vegetables and spices are produced. The country produces about 81 million pounds of tea per year.

Among the fruits grown in Bangladesh, bananas, papayas, pineapples, mangoes, jack fruits, guavas, plums and coconuts are important.

Bangladesh is rich in fish wealth. Rice and fish constitute an average Bangladeshi's principal diet. Hilsa, lobsters and shrimps are some of the fish which are exported to foreign countries.

Bangladesh is predominantly an agricultural country but a large number of large scale industries based on both indigenous and imported raw materials have been set up. Among them jute and cotton textile, paper and newsprint, sugar, cement, chemicals, fertilizers and tanneries are important. Other notable industries are engineering and ship building, iron and steel including rerolling mills, oil refinery, paints, colours and varnishes, electric lamps, other electrical goods and accessories, matches, cigarettes etc. Among the cottage industries handlooms, carpet-making, shoe-making, coir, bamboo and cane products, earthenware, brass and bell metal products, ornaments, etc., are important.

The industrial sector which contributes around 12% to the GDP, is dominated by jute processing, followed by cotton textiles and cigarettes.

The manpower export from Bangladesh increased 31 times in just 17 years during the period from 1976 to 1992. The pattern of the average percentage of distribution or skilled manpower exported during this period are unskilled 46.6, semi-skilled 14, skilled 34, and professional 5.4.

Bangladesh received official remittances from the export of manpower in 1989 of US$0.8 billion which was 4% of GNP, 59% of exports, 22% of imports and 43% of ODA.

In 1991 and 1992, a total of 43,563 skilled manpower were exported to Saudi Arabia alone which was 41% of the combined export to eight selected countries with Kuwait 17%, UAE 11%, Bahrain 5%, Oman 22% and the rest in Malaysia, Qatar and Libya.

Bangladesh offers ample tourist attractions. For the management of tourism there is an autonomous body known as "Bangladesh Parjatan Corporation." Notable tourist attractions are: Sonargaon; 75 mile long beach at Cox's Bazar; Mainamati, an important centre of Buddhist culture; Sundarbans, the home of the Royal Bengal tigers and its fascinating tropical mangrove forests; and Mahasthangarh in Bogra district, the seat of administration of the old rulers with its ruins and archaeological finds.

The currency used is Taka and one US$ is equivalent to 40 Taka.

1.3 COMMUNICATION SYSTEMS

The country has about 2746 kilometres of paved road and roughly 8433 kilometres of perennial and seasonal waterways. Side by side with the development of road transport efforts are under way to develop the water transport system. In fact, rivers are the life-line of the nation providing the cheapest means of transport, water for agricultural operation and a supply of fish for her people. Steps have been taken to put more mechanised vessels into service and to modernise the existing country boats.

Regarding air transport facilities, Dhaka is connected by air with London, Athens, Bangkok, Kuala Lumpur, Singapore, New York, Karachi, Bombay, Calcutta, Dubai, Jeddah, Katmandu, Rangoon, Amsterdam and Bahrain by her national airline (Biman). A number of foreign airlines operate their international services with a link to Dhaka. Regular air services are operated by the Biman between Dhaka and other major towns in the country. The two seaports of Bangladesh are Chittagong and Mongla. Among the river ports and terminals Dhaka, Narayanganj, Chandpur, Barisal, Khulna, Aricha, Goalando, Nagarbari, Serajganj, Jagannathganj, Bhairab Bazar, Bahadurabad and Fulchari ghat are important;.

The country has a network of Radio and Television broadcasting. The Television system was introduced in 1964 and since then sub-stations have been set up in Chittagong, Sylhet, Khulna, Rangpur, Mymensing, Natore, Noakhali, etc. The Colour Television system was introduced on 1 December, 1980. An extensive telecommunication system has connected the capital city with other places within the country. Telecommunication lines have also been established with major cities of the world through the earth satellite ground stations at Betbunia in the Chittagong Hill-Tracts and Talibabad (Kaliakoir) in Gazipur district.

2. HUMAN RESOURCE DEVELOPMENT

Human resource development has been recognised as the promotion and raison d'être of all development effort. Human resource development is primarily related to the formation of human capabilities. In reality human resource development is directly related to both the supply and demand of skilled and trained manpower. Economic growth is not the end of human development. It is one important means. Human development and economic growth are closely connected. People contribute to growth and in turn growth contributes to human well being.

Human development stresses the need to develop human capabilities. It is equally concerned with how those capabilities are used by people who can participate freely in social, political and economic decision making and who can work productively and creatively for development.

2.1 CONSTITUTIONAL OBLIGATION

The constitution of Bangladesh obligates the government to adopt effective measures to introduce a uniform, nondiscriminatory, mass-oriented and universal system of education including free and compulsory education for all children. It further requires of the government to relate education to the "needs of the society" so as to make it available to citizens. The constitution further recognises the need for a radical transformation in the interest of improving the quality of education and increasing access to meaningful education, particularly in rural areas for the emancipation of the toiling mass and for the disadvantaged. Thus equity and access, relevance and excellence as well as public purpose are to be the basis of the educational system so as to create a vibrant and creative society and economy.

The constitution recognises the provision of medical care as part of the basic necessities of life like education, shelter, clothing and food. Improvement of public health has particularly been regarded as fundamental to the state policy. This provision extends to improvement of the level of nutrition.

As to employment, the constitution provides for right to guaranteed employment at a reasonable wage. In respect of employment, non-discrimination is accepted as a principle and forced labour is prohibited.

2.2 EDUCATION

The common view is that the major challenge to education is providing schooling to an increasing number of children. It is not merely the question of literacy and numeracy. It is the transformation of the present generation into productive human resources. For education to play its due role in the development of human resources for national development, the issues of equity, access, relevance, excellence, efficiency and accountability are of great importance. The structure of the formal education system mainly consists of primary, secondary, higher secondary and college/university education.

2.2.1 PRIMARY

The primary education is preceded by a pre-primary phase for urban areas. There are over 2500 institutions at the pre-primary level known as nurseries or kindergarten in the urban areas. The primary school age is from 6-10 years. There are 48,146 primary schools of which 85% are in the Government sector. The primary enrolment ratio is 63. The total enrolment in the primary schools is 13 million children of which 7 million are boys and the rest are girls. There are a total of 0.2 million teachers in the primary schools. The government has set a target of attaining compulsory primary education for all by the year 2000.

2.2.2 SECONDARY AND HIGHER SECONDARY

The secondary school age is 11-15 years. At the end of secondary level there is a public examination which serves as a filtration process for a higher stage of education.

There are 9,731 secondary schools of which only 239 are in the Government sector. The non-government schools receive Government subventions for teachers salary. Most of the schools have co-education and about 16% of them are exclusive girl schools. The secondary school enrolment was 3.66 million in 1991 with about 372 students per school. The teacher student ratio was 1:33. The participation rate is 27.6. There are 4,333 madrashas at the secondary level with a total enrolment of about 1.1 million students.

A total of 718,166 students took part in the Secondary School Certificate (SSC) examination in the year 1993 under the Board of Intermediate and Secondary Education and Madrasha Education Board. The pass rate was 60.8%. In Bangladesh, in the year 1988-89 the primary enrolment ratio was, 63 and that. of secondary and tertiary 17 and 4 respectively. SSC pass rates show the success of the 17% of the age group of the students.

The higher secondary level covers the 11th and 12th years of schooling. There is a proposal to merge this level with secondary raising this up to 12th year of schooling, instead of the 10th year as is present practice. Acceptance of this proposal will change the status of 400 intermediate colleges to schools and another 450 colleges will be required to drop or separate out their 11th and 12th classes.

2.2.3 UNIVERSITY EDUCATION

Under the existing system the college and university education starts after higher secondary level. Some colleges known as university colleges offer courses in different disciplines leading to master degrees. The large majority of the colleges offer undergraduate courses. About 450 colleges have attached with them higher secondary courses. All the colleges are affiliated with the different universities. A national affiliating university has been set up that will affiliate the colleges leaving other universities to concentrate to undergraduate and postgraduate courses and research. There are nine universities being financed by the Government through the University Grants Commission. The total enrolment in the nine universities is 52,620. The teacher student ratio in the university is 1:17. There are a number of private universities and altogether 997 colleges with a total enrolment of 0.77 million. The teacher student ratio in the colleges is 1:33.

2.2.4 AGRICULTURE EDUCATION

Formal agriculture education at the post-secondary level three-year diploma is provided in the eleven Agriculture Training Institutes under the Department of Agricultural Extension. Three Agriculture Colleges offer undergraduate courses in different disciplines in the field of agriculture. One Agriculture University offers both undergraduate and post-graduate courses under six different faculties. The enrolment capacity of the Agriculture University is 3,947.

2.2.5 ENGINEERING EDUCATION

The Engineering education is provided at two levels: diploma and B.Sc Engineerinc under the MOE. Diploma level engineering education is post-secondary and 3 years duration after 10 years of successful schooling. The technological areas in which diploma engineering education is offered in 20 Polytechnic Institutes under the Directorate of Technical Education of the MOE are: Automobile, Chemical, Chemical Food, Civil, Electrical, Electronics, Industrial Wood, Technical and Power. The other areas in which diploma education is provided are: Architecture, Ceramics, Forestry, Marine, Survey, Commerce, Business and Office Management. All the diploma courses a affiliated with the BTEB.

Three Bangladesh Institute of Technology (BIT, formerly engineering colleges) offer 4-year B.Sc Engineering, (degree courses to the students after 12 year of schooling and one BIT offers B.Sc Engineering degree course to the diploma engineering graduates. The Bangladesh University of Engineering and Technology offers both undergraduate and postgraduate courses in different disciplines.

2.2.6 HEALTH AND MEDICAL EDUCATION

Medical education at the undergraduate level is provided in nine government medical colleges. Postgraduate medical education courses are offered by the Institut of Post Graduate Medicine and Research at Dhaka. The combined undergraduate and postgraduate medical enrolment capacity is 8,247. There are a number of private medical colleges offering undergraduate courses. There are twenty-two homeopathic colleges, 5 ayurvedic colleges and 10 unani colleges offering diploma and undergraduate courses. The post secondary diploma level nursing training, is provided in 21 nursing institutes.

2.2.7 TEACHER TRAINING

There are 54 teacher training institutions for the training of primary school teachers. These institutions have an enrolment capacity of 5,010 primary teachers. For the training of secondary school teachers there ten teachers training colleges with an enrolment capacity of 3,786 teachers trainees. Bangladesh Institute of Distance Education (now taken up by the Open University) provides training to secondary school teachers. This programme has the capacity to train 5,000 teachers at a time. The Institute of Education and Research of the Dhaka University offers both undergraduate and postgraduate courses to the secondary school teachers. The Technical Teachers Training College is responsible for the training of the teachers of the Polytechnic and similar institutions. This college offers courses both at the diploma and undergraduate levels. The Vocational Teachers Training Institute provides training for the teachers of the vocational training system at certificate and diploma level.

2.2.8 MASS EDUCATION

In Bangladesh the need for literacy has been accepted as an organic and interactive relationship with development. As a result the government has created a separate division for primary and mass education directly under the administrative control of the Prime Minister. Adult and functional literacy has been given very high priority. Several experiments in this regard have been carried out by the government agencies and NGOs like BRAC, Gramin Bank, etc. For example, BRAC training programmes can be divided into two major types: human development training and occupational skill development training.

3. TECHNICAL VOCATIONAL EDUCATION AND TRAINING SYSTEM

The technical vocational education and training (TVET) policy guidelines and implementation strategies are decided by National Council for Skill Development and Training (NCSDT) and the Bangladesh Technical Education Board (BTEB).

3.1 NATIONAL COUNCIL FOR SKILL DEVELOPMENT AND TRAINING

The National Council for Skill Development and Training (NCSDT) was founded in 1979 through a Government Resolution authorised by the President. The NCSDT comprises high level representatives from 22 different organisations including 2 Members of Parliament, concerned ministries, labour union and Chambers of Commerce and Industries.

The Minister of Labour and Manpower is the Chairman of the Council. Although it has high-level representation and formulates policies through established committees, it is not a statutory body. Under the provisions of the government resolution NCSDT is primarily responsible for:

- establishment of trade standards;
- formulation of national level policies relating to vocational education;
- review of national skill development needs; and
- coordination of all formal and non-formal skill development programmes.

3.2 BANGLADESH TECHNICAL EDUCATION BOARD

The Bangladesh Technical Education Board (BTEB) is a statutory organisation established through the *Technical Education Act* of 1967. As per provision of the Act the BTEB is responsible to organise, regulate, supervise, control and develop technical and vocational education in the country.

The main functions of the Board are to:

- develop and prescribe courses of instruction ;
- grant recognition or withdraw recognition from education institutions offering its courses;
- prescribe conditions governing admission of students;
- prescribe mode of inspection of the affiliated institutions;
- hold, conduct and regulate examination of affiliated institutions;
- award diplomas and certificates to the successful candidates;
- enter into and carry out contracts in exercise of powers assigned to it by the Act and regulations ; and
- do such other acts as it may consider necessary to organise, regulate, supervise, control and develop technical and vocational education.

The BTEB formulates policies and implementation strategies through a series of established statutory and non-statutory committees in carrying out academic and other activities. The activities of the Board are conducted through 3 divisions; administration, examination and curriculum; headed by the divisional heads under the overall direction and supervision of the Chairman.

3.3 STRUCTURE OF TVET

The technical vocational education and training is provided at the secondary level. For the largest number of non-formal trade courses the *TVET* starts after eight years of schooling and for few selected trades after secondary level. The duration of the training for the national skill standard (NSS) III and II one year each at successive stages. Out of one year in each stage 9-months is devoted to institutional training and 3-months to industrial attachment. From 1994 agriculture has been introduced as a compulsory subject at the secondary level as an integral part of general education. A sizeable number of secondary schools (left over from the community school programme) offer engineering trade courses for the boys and sewing and other related trade courses for the girls as optional subjects. There are TVET courses offered as non-formal training programmes either by Government agencies, NGOs, private and enterprise-based institutions which have different durations and do not conform to the National skill standards requirement.
A brief outline of the TVET institutions run by the Government, NGOs and private individuals follows.

3.4 VOCATIONAL TRAINING INSTITUTIONS AND TECHNICAL TRAINING CENTRES

The Vocational Training Institutions (VTI) and the Technical Training Centres (TTC) offer TVET courses at two levels of NSS. (NSS classifications have five hierarchical levels: basic, III, II, I and master, given in Annexure-1). The standard III is for semi-skilled, and standard II for skilled workers. There are 51 VTIs administered by the Directorate of Technical Education under the Ministry of Labour and Manpower (MOLM). A total of ll TTCs are administered by the Bureau of Manpower Employment and Training under the Ministry of Labour and Manpower (MOLM). There are a few NGO institutions offering the NSS III and II training programmes.

There are also some NGO institutions from where the trainees take part in the NSS testing. The NCSDT is responsible through its Planning and Development Committee for setting the NSS for different trades. The BTEB prepares the detailed syllabus and training specification on the basis of the NSS set by the NCSDT.

The BTEB is responsible for conducting the National Skill Standard Test(NSST) and for certification of the successful candidates.
The Department of Youth Development under the Ministry of Youth and Sports (MOYS) provides non-standard and non-formal short training ranging from a few weeks to months duration and these training programmes are designed to generate income.

3.5 VOCATIONAL EDUCATION/TRAINING AS A PART OF GENERAL EDUCATION

The community school programme started in 1983. The main objective of the community school was to provide non-formal practical training to unemployed youth and school dropout. The programme also extended training facilities to the interested students from the secondary school. The community school facilities were provided to 390 secondary schools for training in elementary skills. The main trade areas were mechanical, house construction and agriculture for the boys and sewing and food processing for girls. A series of evaluations were conducted to examine the effectiveness of the community school programme. At certain stages decisions were taken to discontinue the community school programme. A good number of secondary schools continued their community school programmes on their own with the already available teachers and facilities. As a result of the decision of the Ministry of Education a survey is being conducted to assess the existing situation of the community school programme with the expectation og revitalizing it.

As a result of the decision of the Government the MOE has introduced the compulsory subject agricultural education in all secondary schools. The secondary school students from class VI are to take this subject from January 1994. The main areas the students are to study at the secondary level are an orientation to agriculture, horticulture, fishery and livestock. The subject will be taught initially by the field level experts of the departments of agricultural extension, horticulture, fisheries and livestock. The field level facilities of these departments and from the farmers with their expertise will be used for practical training.

Basic trade training has been introduced on an experimental basis as an optional subject for the students of class IX in the secondary schools and madrashas from January 1994. The objective of the basic trade training is to train skilled workers at the NSS basic level who will be able to work on repetitive jobs under constant supervision.

The interested and willing 5,000 students from the secondary schools and madrashas will take the basic trade training course in the nearby VTIs and TTCs affiliated with the BTEB. The students will attend the training in the afternoon in the week covering a total of 360 hours, the requirement for basic skill standard. The responsibility for syllabus, training resources, testing and certification for the student undergoing basic trade training has been entrusted to the BTEB.

But for the general education subject the responsibility for syllabus and learning resources lies with the National Curriculum and Textbook Board (NCTB) and for testing and certification with the Board of Intermediate and Secondary Education. Such provision for double certification at the secondary level is also in practice in countries like Korea, Malaysia and the former Soviet Union.

3.6 UNDERPRIVILEGED CHILDREN EDUCATION PROGRAMME

The Underprivileged Children Education Programme (UCEP) is a different model that has been put into operation in the area of TVET. The UCEP programme is financed by a number of international agencies. The model is in the experimental stage. Under this programme illiterate working children mainly from urban slum areas are given a three-year intensive course of basic education followed by a one year bridging course to vocational training programme. The UCEP trade training programme is now offered in 3 trade schools. From 1994, most of the UCEP trade training programmes have been affiliated by the BTEB at NSS III level. The three trade schools have their trade training programmes designed and operated according to the requirement of the community.

3.7 MIRPUR AGRICULTURAL WORKSHOP AND TRAINING SCHOOL

Mirpur Agricultural Workshop and Training School (MAWTS) is a project of Caritas - Switzerland. MAWTS conducts production oriented training programmes of three-year duration mainly for rural boys in the operation, repair and maintenance of agricultural machineries at the field level. Short training of up to one year duration is also conducted by the MAWTS for certain other related trades. The MAWTS follows the practice of accepting outside jobs done by the trainees during the process of training. The earning through such jobs covers about 50% of the training cost. The trainees of the three-year training programme take the NSST III after two years of training and NSST II conducted by the BTEB after three years of training respectively. There are four other NGO institutions with this pattern of training and their trainees also take NSST III and II in a similar way. Two other NGO institutions run by Rebita-Al-Alam-Al-Islami and Swedish Free Mission are affiliated with the BTEB. They are offer trade courses of NSS III and II. There are as many as 56 NGO trade schools and they are members of the Association of Private Non-Profit Trade School (APNTS). Most of the other NGO member trade schools of this group offer non-standard trade courses of shorter duration.

3.8 BANGLADESH RURAL ADVANCEMENT COMMITTEE

Bangladesh Rural Advancement Committee (BRAC) training programmes have two distinct approaches: human development, and occupational skill development. The BRAC has seven Training and Resource centres. The bulk of the training t programmes are conducted outside these facilities at the field level to the village BRAC group members. Skill training includes cow rearing, silk worm rearing, driving, fish nursery, horticulture, mechanic and a host of other areas, whereas human development training includes social awareness, rural planning and arrangement, basic accounts, teacher training and the like. These are non-standard training certified by BRAC. Besides, a large number of NGOs, both local and foreign as well as private individuals and trusts are also engaged in the process of skill development, usually targeted for the rural poor and women. Traditionally in this part of the world skill transfer takes place from the experienced person and craftsman to the attached helper. Examples of such skill transfer appear to be prominent in areas such as agriculture, construction, distributive and other services.

3.9 PRIVATE TRADE SCHOOLS

There are a large number of private trade training schools run by individuals and trust initiatives. The main motive of the private trade schools, though expressed as social service, is commerce and profit. The trade schools run by the limited private individuals to provide social service in line with trade schools is run by the trusts. The growth of private trade schools in the country is primarily hinged to the large scale export of skilled and unskilled manpower to the Middle East and other countries. These types of private trade schools offer non-formal and non-standard training of short duration. They do not in most cases proper have qualified teachers and training facilities It is very difficult to get the exact number of private trade schools and the type and quality of training they offer. They are not registered or affiliated with any training agencies. They prepare their own syllabuses and arrange for testing and certification. For assessing the magnitude of the private effort in the trade training and their type as well as quality a nationwide survey is now being conducted by the BTEB. On the basis of the findings of the survey steps will be taken to help them to conform gradually to the NSS requirement.

3.10 ENTERPRISE-BASED TRAINING

The description so far under the TVET system takes care of the pre-employment training delivery system. Enterprise-based training is the training conducted in the enterprise or in the workplace. Enterprise-based training is not practiced much due to the low level of economic development in Bangladesh. Vocational training institutions are not capable of performing the two functions of pre-employment training and specialised advanced skill training as needed by specific employers. Although small in size enterprise-based training is in operation with sector corporations and large private establishments.

Organisations like Bangladesh Small and Cottage Industries Corporation (BSCIC) have provision for enterprise-based as well as inservice training facilities. The Power Development Board (PDB) has training centres for power plant skilled workers and also for skilled workers employed in the maintenance of transmission and distribution lines. Training in the work places connected with credit facilities and income generation activities are also conducted by the NGOs like Gramin Bank, BRAC, YMCA.

Enterprise-based training fits the needs of the employers and it is efficient as well as cost effective but such training reduces the mobility and retrainability of the workers. Almost all of the enterprise-based training programmes are non-formal and non-standard. There is no directory on the type and number of enterprise-based training institutions. The preparation of syllabus, implementation of training programmes, testing and certification are done by the respective enterprises. A survey is now being conducted by the BTEB to assess the extent, type and level of enterprise-based or workplace training to prepare a directory of such training institutions and to help them to conform to the NSS wherever possible.

4. DEMAND FOR AND SUPPLY OF SKILLED MANPOWER

4.1 GROSS DOMESTIC PRODUCT AND EMPLOYMENT IN MAJOR ECONOMIC SECTORS

As per the Labour Force Survey (LFS) out of the total population 70.8 million are above the age of 10. The size of the civilian labour force is 50.7 million i.e. 71.6%. The Bangladesh economy is rural based and nearly 85% of the 110 million population live in the rural areas. Agriculture contributes 37.60% to the GDP (see Annexure-2) with direct employment of 65% of the labour forces. The manufacturing industries contribute 9.8% to the GDP with 13.9% labour force employment. The construction industry contributes 6.04% to the GDP with employment of 1.3% of the labour forces.

4.2 ADDITIONAL DEMAND FOR SKILLED MANPOWER

A study was conducted in 1985 by the Bureau of Manpower Employment and Training under GOB/UNDP/ ILO Project-BGD 80/030 for the assessment of training needs for the TTC and VTI. The report of the study put forward a number of significant findings. One such finding is a projection of additional demand for skilled manpower in 18 different occupational areas (See Annexure-3). This study by and large is an extensive survey of the district wise demand of jobs covering the entire country. The highest number of job requirement during this period from 1985-90 is in the electrical trade which is about 17% in the 18 trade areas. The total number of job requirements in the 18 trade areas has been estimated for this period to be 124,696 without any classification of the levels of skills in the NSS grade. The study report also reflected that in 15 trade areas out of the 18 mentioned, only 1.78% of the employed skilled workers were trained in the VTI and TTC and another 8.79% received non-standard training in institutions and places other than VTI and TTC. The remaining 89.43% of the employed skilled workers did not receive any sort of training at all.

4.3 JOB DESCRIPTION IN GARMENT INDUSTRIES

An ILO BMET/UNDP Project BGD/85/153 study was conducted in 1993 on Job Description in the Garment Industries of Bangladesh with an aim to facilitate the formulation of appropriate skills and other standards in the garment industries The study very rightly raises the issue that standard job description is the basis of improved productivity. The NSS classification is the prerequisite for job description, job specification and personnel specification. The NSS job classification is not followed in the garment industries. The study selected 15 jobs of garment industries in 5 occupational areas. An estimated number of 0.82 million workers of different categories are employed in the garment industries of which nearly 80% will be covered by the 15 selected job titles.

Surprisingly enough the study reveals that almost 100% of skilled workers do not have any formal training. By and large the formal education level of these skilled workers ranges from 5-12 years of schooling. In order to ensure quality and productivity of the garment industries and to provide mobility to the skilled workers as per the NSS it is essential to arrange for the appropriate type of training for them as per NSS classification.

4.4 EXPORTABILITY OF SKILLED MANPOWER FROM BANGLADESH

A study conducted by the BTEB in 1993 on the Exportability of Skilled Manpower from Bangladesh provides some very interesting information about skilled manpower training requirements. In 1992 Bangladesh exported 188,124 workers to overseas countries. Among them there were 11,375 professionals, 50,689 skilled, 30,977 semi-skilled and 93,083 unskilled workers.

The manpower export from sangladesh increased 31 times in just 17 years during the period from 1976 to 1992. The pattern of the average percentage of distribution of skilled manpower exported during this period is: unskilled - 46.6, semi-skilled - 14, skilled - 34 and professional - 5.6. The UNDP Human Development Report 1992 shows that sangladesh received official remittances from the export of manpower in 1989 US $ 0.8 billion which was 4% of GNP, 59% of exports, 22% of imports and 43% of ODA.

The rise of manpower export from 1988 to 1992 during the years was 376% whereas the increase in official remittances was 141 percent. The reasons for not increasing the remittances proportionate to the rise in the export of manpower were attributed to:

- export of a large proportion of unskilled in place of skilled manpower;
- export of unclassified manpower;
- remigration of skilled manpower at a higher rate;
- unofficial remittances due to higher black market exchange rate;
- abolition of wage earner scheme;
- unscrupulous practices of certain recruitment agencies;
- cumbersome official procedures; and
- deposits to foreign accounts.

The export of unskilled manpower increased three fold whereas skilled manpower export just doubled during the period from 1988 to 1992. The export of skilled manpower felt by 10% that is from 37 to 27% and export of unskilled manpower rose by 8% from 43 to 51% during the same period of 1988 to 1992.1 order to arrest this situation of large scale unskilled manpower export it is essential to put into operation the NCSDT National Skill Standard classifications in the training of skilled manpower.

4.5 TRAINING NEED SURVEY FOR PDB POWER PLANT SKILLED WORKERS

A training need survey for the PDB power plant skilled workers conducted by the BTEB in 1991 -92 through an agreement with the German Agency for Technical Cooperation (GTZ) has identified the performance competence levels of the employed skilled workers and relevant issues regarding training programmes for them. There are 1288 skilled workers employed in 16 power plants in 17 occupational areas against a total number of posts of 1332. As per the self-assessment rating the performance competence of the skilled workers is less than 40% of the requirement. The study report clearly states that for most of the issues the findings centre around the non-availability of skilled standard and skill standard tests. For this the PDB needs to address the basic issue and undertake a job analysis involving job descriptions, job specifications and personnel specifications on the basis of the NSS for the power plant skilled workers.

4.6 VTI GRADUATE JOB-MARKET SURVEY 1993-94

The Bangladesh Technical Education Board through an agreement with the Directorate of Technical Education has mounted a study on the job-market survey for VTI graduates. The data collected through a well-designed questionnaire by the trained investigators from 285 industries have been tabulated. The main sectors of industries and services covered by the survey are: engineering, textiles, construction, petrochemicals, food preparation and preservation, gas, water, electricity, transportation and communication. The total number of employees of these industries are 199,080.

The distribution of these employees in different categories shows that

Officers and Office staffs	34,147
Supervisors	3,115
Skilled workers	141,834
Unskilled workers	18,984

The skilled workers employed in these industries are not classified according to the NSS. Both the management and the representatives of skilled workers expressed sincere desire and interest for introducing NSS classification in their industries. Our investigators through their discussion with the management and the representatives of the skilled workers have managed to categorise the employed skilled workers in the frame of NSS:

Basic	15,253
NSS III	38,760
NSS II	74,454
NSS I	11,316
Master	2,051
Total	141,834

4.7 SKILLED MANPOWER TRAINING FACILITIES AS PER NSS

The Bangladesh Technical Education Board is responsible for developing the curriculum of the vocational training programme as per the NSS set by the NCSDT. The curriculam for the NSS grade II, III and basic level for different trades have been developed. Training is being conducted to these curriculum. The duration for the NSS basic trade training is 360 hours and its entry requirement is open and decided as per the requirement of trade. The duration of training for the NSS III and I is nine months of institutional training three months industrial attachment for each grade. The entry requirement for NSS III is eight years of schooling for most trades and 10 years of schooling for a few selected trades. The entry requirement for NSS II is NSS III. The NSS grade I and Masters is yet to be developed by the NCSDT. The skill testing is done by the Bangladesh Technical Education Board for the regular trainees of the BTEB affiliated and approved training institutions. The affiliated institutions follow the BTEB curriculum and regulation for the implementation of the training programme. The approved training institutions follow their own regulations and curriculum that. cover the BTEB requirement. The employed skilled workers can be the NSST conducted by the BTEB in the designated centres. The employed skilled workers are required to qualify in the pre-test before sitting for NSST.

The VTIs and TTCs are the BTEB affiliated vocational training institutions following curriculum designed as per the NSST. The trainees of these institutions are taking NSST. There are a number of approved NGO institutions following their own regulation and curriculum but their trainees take NSST. The total number

of seats for NSS III and II in the VTIs and TTCs is 10,650. The capacity of the approved NGO institutions for NSS III and II is about 600 only.

The UCEP trade training programmes of the three trade schools have been affiliated by the BTEB for 13 trade courses of NSS level III from 1994. The curriculam of the UCEP have been adjusted to conform to the NSS requirements specified by the BTEB and the training programme will be implemented as per the BTEB regulation. The NGO institution like TTC of Swedish Free Mission and of the Rabitat-Al-Alam Al-Islami are affiliated with the BTEB. The combined capacity of VTI, TTC, UCEP and the NGO institutions for NSS ll l and ll are 11,410 seats. The basic trade skill training introduced for the 5,000 secondary school students from 1994 in NSS basic and w be tested by the BTEB. The 27 Textile Mobile Schools admit 540 students after eight years of schooling. Their training programmes are non-formal and non-standard and affiliated with the BTEB.

4.8 ARTICULATION OF TVET WITH SECONDARY EDUCATION SYSTEM

The Vocational education/training in agriculture and basic trade that started from 1994 as a part of general education at the secondary level is a significant step to orient and train large numbers of secondary school student — both failures and graduates; to enter either into the world of work or continue study with a skill. In order to ensure especially through basic trade training, the achievement of skills, provision has been made for double certification — one by the Secondary Education Board and the other by the BTEB. The community school training programme now in operation will be replaced gradually by the basic trade training programme. Depending on its success, attempts will be made to introduce the basic trade training programme as a compulsory subject for all the students of the secondary schools and madrashas. The compulsory subjects on agriculture and basic trade will provide facilities for skill training through vocational education at the secondary level to about 0.7 million boys and girls. This will bring the articulation of TVET with the general stream of education.

4.8.1 SSC (VOCATIONAL) IN BANGLADESH

Based on assessment of the employment market demand for more skilled workers and skilled-based technicians at the supervisory level, a program of SSC (Vocational) has been prepared by the Bangladesh Technical Education Board. The SSC (Vocational) will begin from January 1995. The structure of the SSC (Vocational) curriculum is given in Appendix I. The entry requirement for SSC (Vocational) will be eight years of successful schooling. Successful candidates of this program will be awarded SSC (Vocational) certificate which will be equivalent to general SSC and at the same time they will be awarded NSS-III certificate after Class-IX and NSS-II along with SSC (Vocational). SSC (Vocational) will be considered equivalent to SSC (General) for entering further education in the relevant area. The students with NSS-III and -II will be qualified to enter into the job market as semi-skilled and skilled workers respectively. Proposed SSC (Vocational) curriculum will have 36 weeks' institutional training and eight weeks' industrial attachment. There will be a total of 1760 periods in each year having 40 periods per week. In Class-IX there will be four periods for each of Bengali and English and two periods teaching contact hours per week for social science. It will have six periods trade theory and 24 periods trade practice. Similiarly in Class-X there will be Bengali and English and other subjects of the same weight. Moreover, on computer and entrepreneurship the subjects will be included in the trade area. After completion of SSC (Vocational) the students will enter into a 2-year HSC (Vocational) program and successful completion of this program will entitle the students to get HSC (Vocational) and NSS-I certificates. HSC (Vocational) graduates will be eligible to enter into the further higher education stream. The NSS-I certificate will entitle the students to enter the job market as highly skilled workers.

Proposed Syllabus Structure of SSC (Vocational) Curriculum of Two Years Duration and Equivalent to General SSC

Weekly periods and mark distibution

1st Year (Class-IX)

Period and mark distribution / Subject	Period			Mark distribution		
	Theory	Pract.	Total	Theory	Pract.	Total
1. Bengali-I	4	-	4	150	-	150
2. English-I	4	-	4	150	-	150
3. Social Science-I	2	-	2	100	-	100
4. Trade Science-I	1	3	4	50	50	100
5. Trade Mathematics-I	2	-	2	100	50	100
6. Drawing	-	3	3	-	50	50
7. Trade	3	18	21	100	350	450
Total	**16**	**24**	**40**	**650**	**450**	**1100**
8. Industrial Attachment (8 weeks)					**100**	**100**
Grand Total					**550**	**1200**

2nd Year (Class-X)

Period and mark distribution / Subject	Period			Mark distibution		
	Theory	Pract.	Total	Theory	Pract.	Total
1. Bengali-II	4	-	4	150	-	150
2. English-II	4	-	4	150	-	150
3. Social Science-II	2	-	2	100	-	100
4. Trade Science-II	1	3	4	50	50	100
5. Trade Mathematics-II	2	-	2	100	-	100
6. Use of Computer	-	2	2	-	50	50
7. Entrepreneurship	1	-	1	50	-	50
8. Trade	3	18	21	100	350	450
Total	**17**	**23**	**40**	**700**	**450**	**1150**
8. Industrial Attachment (8 weeks)					**100**	**100**
Grand Total					**550**	**1200**

4.9 TRAINING CAPACITY AND RELATED ISSUES

Analysis of the different aspects of the people, economy, human resource development, the TVET system, demand for and supply of skilled manpower emerge with a number of issues and important among them are: a very high level of unemployment, a high level of illiteracy, a very low level of economic development, and an inadequate allocation for human resource development. Furthermore, achievement of the set objective of compulsory primary education by the year 2000 will bring large a number of students to the secondary level. This will create more pressure on the secondary schools where there are no seats available. Expansion of the seats in the existing secondary schools, for which enough resources are not available, will create more educated unemployed. The existing TVET system is inadequate to meet the demand of the internal job market. The demand for skilled manpower from the overseas job market remains unmet and as a result large scale unskilled workers are being exported in place of skilled workers. Most of the NGO vocational training institutions are running non-standard and non-formal training courses. The private vocational training institutions are also running non-standard and non-formal training courses. There is a limited range of enterprise-based vocational skill training that is run by employers. Such enterprise based training is centred around specific jobs that restrict the mobility of the workers in the job market and also their retraining. There is no proper coordination among the training agencies of Government, enterprise-based, NGO and private sectors.

The combined capacity of the VTI, TTC, NGO and UCEP for NSS III and II is 11,410 seats. The non-standard training capacity run by the Government agencies, NGO and private institutions of 3 months duration and above, the level of which can be compared with basic level, will not exceed 10,000 trainees in all trades.

As per the BTEB record the percentage of those passing the VTI and TTC for the period from 1985-1992 for NSS III is 53, that of NSS II, 57 and that of MAWTS about 95. As per the Tracer Study of Graduates of 36 VTIs in 1989 about 60% of VTI graduates got employment within one week of graduation and 38% within six months. The percentage of employment for the graduates from MAWTS within a short time after graduation up to 1992 for their three-year courses was about 94%.

For the Dhaka UCEP the pass rate of the graduates from 1988-1989 to 1992-1993 varies from 93-100%. The employment rate for the UCEP graduates within six months of graduation was 93 to 100% during the period from 1991 to 1992. The high rate of employment; for the MAWTS and UCEP graduates was possible due to the good quality of training and placement services provided by these institutions.

The World Bank study Report No. 7604-BD Bangladesh Vocational and Technical Education Review 1989, observes in its policy recommendations through a theoretical, exercise that by internationally recognised practices the VTI and TCC NSS-III and NSS-OO two year training duration was too long for the objectives and skills being taught. The study recommended that the 2-year duration for NSS-III and NSS-II should be reduced to one year. Such an observation is very unwise on the basis of a single study of the rate of return approach for the socio-economic sector like vocational training, because it has a bearing on the overall socio-cultural aspect, economic policy, industrial policy and host of other micro and macro policies and practices.

The World Bank Report No. 7604 BD observes that non-standard training courses provided by the Government agencies, NGO and private initiative vary a great deal in their administrative structure, goals and clients. The report adds that there is a need to establish minimum standards for facilities, equipment, curriculum and personnel who teach in these institutions. Policy should be established requiring MOE to authorize and finance the BTEB to establish and manage an accreditation programme for these institutions.

Looking through the sections 4.2 to 4.6, demand for skilled manpower within the country and overseas market, it is evident that NSS classification that was partly approved (NSS III and II) before 1985 and used by VTI and TTC for their training programmes and the complete NSS framework approved by NCSDT in 1993 is not in practice in the employment market. Under such conditions both the skilled workers and the employers are not sure about the level and quality of skill they are being paid for.

A UNDP/ILO Project BGD/80/030 Study Report 1986 on Recruitment Rules and Pay Structures for skilled workers made a series of observations and one of these observations was about the classification of skilled workers. It states that among the 25 establishments considered by the study none had a clear cut description/ definition of semi-skilled and skilled workers. The Report adds that a uniform definition of unskilled, semi-skilled, skilled and highly skilled categories is also desirable for the proper application of pay-scales. The BTEB study on the exportability of skilled manpower from Bangladesh in 1993 has identified eight reasons for not increasing the remittances proportionate to the rise in export of manpower during the period from 1989 to 1992. One of them is the export of unclassified manpower.

The steering committee constituted by the Government with a Member of the Planning Commission as Chairman, to examine the different issues on TVET, recommended in November 1992 that the training programmes run by the NGO training institutions should conform to the NSS curriculum of the BTEB. It further adds that the MOE and thMOLM should take appropriate steps for the setting up of regular functional institutional relationship of the BTEB with NCSDT. The purpose would be that the BTEB could develop appropriate curriculum both for the formal and non-formal training programmes as per the present and future needs of the job market. Furthermore BTEB shoulddevelop a scientific feedback mechanism involving labour market and training institutions for regular updating of the curriculum. The BTEB needs strengthening and consolidation of its physical facilities and professional expertise.

For the entire job market both within the country and overseas employment job description, job specification and personnel specification at the different NSS level are not in operation. The TVET system is quite inadequate to meet both the internal job market and overseas employment demand for skilled manpower. The

most serious lapse in the job market is the absence of NSS classification for skilled workers.

The BTEB is in the process of entering into two more job market surveys for skilled manpower. Findings of these two studies are expected to be available by August 1994. Findings of these studies along with four other studies completed by the BTEB and a number of other recent studies conducted by the ILO and other agencies proved enough information to prepare new NSS at the basic, lll and ll level for number of occupational areas.

The BTEB has the official responsibility to prepare NSS for the approval of NCSDT. This will facilitate the preparation of NSS and their implementation in the job market and in the vocational training system.
The nationwide survey of the training institutions as indicated in para 3.11 has been completed by the BTEB. There are as many as 385 vocational training institutions run by Government agencies, NGO and private and trust initiatives. The bulk of these training institutions except VTI, TTC, and UCEP run non-formal and non-standard training programmes. It is not possible to produce standard product and services without appropriately classified skilled manpower. It is imperative that the NSS is followed in the job market by appropriately designed job descriptions, job specifications and personnel specifications and these are enforced in the recruitment and promotion of skilled manpower thereby compelling the training institutions and testing agencies to follow the NSS in designing their syllabuses.

5. FINDINGS AND CONCLUSIONS

`The analysis and synthesis of the secondary data/information presented in the section 4 of the study emerge with a number of issues that need immediate attention within the purview of the TVET and significant among them are:

5.1 ISSUES

- a large scale unmet demand of skilled manpower both for the internal job market and for overseas employment warrants strengthening of TVET facilities.
- NSS classification should be established and put into operation both in the internal job market and for the overseas employment and all the Government, NGO, private and enterprise-based training programmes should designed and implemented in line with the VTI and TTC NSS basic, lll and ll training programmes.
- articulation of TVET system with the general stream of education.

Findings of the study have created an adequate information base for alternative decision in resolving the issues through the implementation of a series of recommendations within the TVET and secondary education system that will enhance the status of the TVET system of Bangladesh.

5.2 RECOMMENDATIONS

5.2.1 Arrangement should be made to conduct detail job market survey for different occupations to develop NSS, E NSST, job descriptions, job specifications and personnel specifications and to ensure the implementation thereof in the job market.

5.2.2 (BTEB, NCSDT, MOE, MOLM)
A Directory of classified jobs for different occupations should be prepared, printed and made available to the employers and training agencies.

(BTEB, NCSDT, MOE, MOLM)

5.2.3 A National Directory of classified skilled manpower should be prepared, printed and made available to planners, employers and training agencies.

(BTEB, NCSDT, MOE, MOLM)

5.2.4 The curriculum of the TVET programmes should be prepared as per the NSS e.g. NSS basic, III, II, I and masters and strategies should be framed to ensure implementation of such curriculum in Government, NGO, private and enterprise based training institutions.

(BTEB, MOE, MOLM)

5.2.5 The agriculture subject introduced in the secondary level from 1994 should aim at the achievement of saleable skills and on the basis of findings the implementation of the subject, basic trade should gradually be made compulsory in the secondary level.

(BTEB, NCTB, MOE, MOA, MOLM)

5.2.6 There should be provision for the lateral transfer of students from the TVET stream to the general educational stream and from the general education stream to the TVET stream at an appropriate stage by restructuring both the TVET and secondary general education structure.

(BTEB,NCTB,MOE)

5.2.7 The Government, NGO, private and enterprise-based training facilities should be expanded on the basis of the job market survey and NSS classification with special attention to garment and such other industries and occupational areas both for the internal job market and overseas employment.

(BTEB, BMET, DTE, NGO, Private)

5.2.8 Arrangement should be made to conduct and initiate research in the different aspects of TVET and in the process of development of NSS, NSST and in the areas of articulation of TVET with the general stream of education.

(BTEB, NCSDT, MOE, MOLM)

5.2.9 In order to achieve all these the physical infrastructure and the professional capacity of the BTEB and the working relationship between the NCSDT and BTEB should be strenglthened as per the recommendation of Sterring Committee constituted by the Government.

(BTEB, MOE, MOLM)

APPENDIX I

NATIONAL SKILL STANDARD CLASSIFICATION (AS APPROVED BY NCSDT)

NSS	Skill Level	Competence Level (capable of doing)
Basic	Less-skilled	Routine/Repetitive job under 100% supervision.
III	Semi-skilled	Routine/Repetitive job under minimum supervision and new job under direct supervision
II	Skilled	Routine/Repetitive job without supervision and new/complex job with supervision
I	Highly skilled	Limited planning of job and coordination and supervision of activities of a group of workers
Master	Master Craftsman	Planning of a new complex job, coordination and supervision of activities of a group of workers and evaluation and control of quality of works.

APPENDIX II

GROSS DOMESTIC PROJECT (GDP) AND EMPLOYMENT IN MAJOR ECONOMIC SECTORS

Major Economic Sector	Percentage GDP 1990-91	Labour Force x 1000 1989	Percentage
All Sectors	100	50, 148	100
Agriculture, Forestry, Fishing	37.60	32,571	65
Mining, quarrying	0.02	89	-
Manufacturing Industry	9.8	6,976	13.9
Electricity, Gas, Water	1.3	18	-
Construction	6.04	662	1.3
Trade, Hotels, Restaurants	9.08	4,130	8.2
Transportation, Storage, Communication	11.83	1,278	2.5
Finance, Business and Services	1.90	238	-
Community, Personal Services	10.45	1,795	3.6
Household Sector and not adequately defined	7.64	2,391	4.8
Public Administration and Defence	4.34	-	-

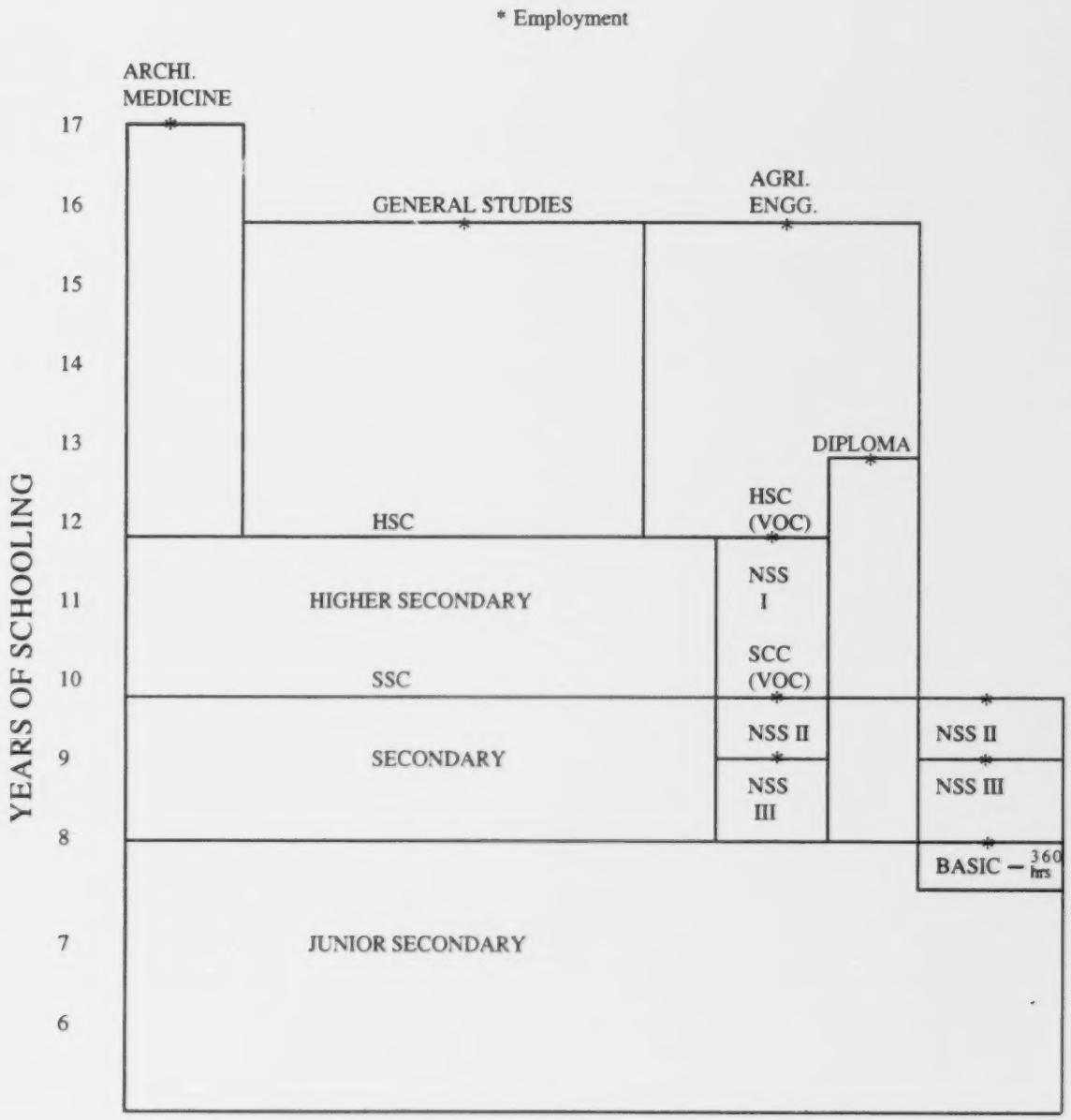
APPENDIX III

DEMAND FOR SKILLED MANPOWER FOR 5 YEARS, 1986-1990

Trade	Demand (Number)
Automotive	8,080
Radio Television	197
Refridgeration and Air conditioning	161
Electrical	21,606
Turner	7,160
Machinist	10,004
General Mechanics	46,971
Welding	8,386
Drafting (Civil)	792
Drafting (Mechanical)	259
Carpentry	6,717
Plumbing	1,670
Masonry	3,222
Farm Mechanics	716
Power Pump Maintenance	772
Tin/Black Smith	1,963
Foundry	5,423
Pattern Making	597
Total	124,696

Appendix IV

SSC (Vocational) in Overall Educational Structure



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